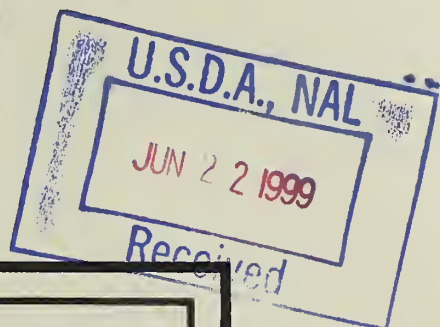


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

aTP372
.6
.U5578
1957

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
WASHINGTON, D.C.



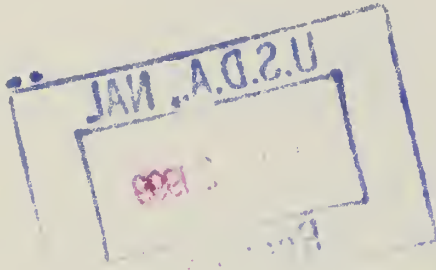
**UNITED STATES
STANDARDS**
for grades of
CANNED OKRA



EFFECTIVE JULY 8, 1957

Second Issue

These standards supersede the standards
which have been in effect since
October 18, 1933



This is the second issue of the United States Standards for Grades of Canned Okra. These standards were issued by the Department after careful consideration of all data and views submitted.

These standards were published in the Federal Register on June 7, 1957 (22 F.R. 4012) to become effective on July 8, 1957.

As in the case of other standards for processed fruits and vegetables, these standards are designed to serve as a convenient basis for sales, for establishing quality control programs, and for determining loan values. They will also serve as a basis for the inspection of this commodity by Federal inspection service, which is available for the inspection of other processed products as well.

The Department welcomes suggestions which might aid in improving these standards in future revisions. Comments may be submitted to, and copies of these standards obtained from:

Chief, Processed Products Standardization
and Inspection Branch
Fruit and Vegetable Division
Agricultural Marketing Service
United States Department of Agriculture
Washington 25, D. C.

UNITED STATES STANDARDS FOR GRADES OF CANNED OKRA¹

Effective July 8, 1957

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

Sec.

- 52.3331 Product description.
- 52.3332 Types of canned okra.
- 52.3333 Styles of canned okra.
- 52.3334 Grades of canned okra.

FILL OF CONTAINER AND DRAINED WEIGHTS

- 52.3335 Recommended fill of container.
- 52.3336 Drained weights.

FACTORS OF QUALITY

- 52.3337 Ascertaining the grade.
- 52.3338 Ascertaining the rating for the factors which are scored.
- 52.3339 Color.
- 52.3340 Size.
- 52.3341 Defects.
- 52.3342 Character.

METHODS OF ANALYSIS

- 52.3343 Percent, by weight, of fibrous material.

ASCERTAINING THE GRADE OF A LOT

- 52.3344 Ascertaining the grade of a lot.

SCORE SHEET

- 52.3345 Score sheet.

AUTHORITY: §§ 52.3331 to 52.3345 issued under sec. 205, 60 Stat. 1090, as amended; 7 U. S. C. 1624.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.3331 *Product description.* Canned okra is the product prepared from clean, sound, succulent, immature pods of either the green or white varieties of the okra plant, which are properly

trimmed and sorted; which may or may not have undergone partial fermentation; and is washed, packed, and processed in accordance with good commercial practice which includes such product as defined in the standard of identity for canned okra (§ 51.990 of this chapter, 20 F. R. 9621-9622) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.3332 *Types of canned okra*—(a) *Type I canned okra.* Canned okra of this type has been partially fermented in a salt brine before processing.

(b) *Type II canned okra.* Canned okra of this type has not been fermented before processing.

§ 52.3333 *Styles of canned okra*—(a) “Whole” means canned okra consisting of whole pods with stems removed and with or without the caps removed.

(b) “Whole salad” means canned okra consisting of whole pods with stems attached which are at least one-half inch but not exceeding one inch in length.

(c) “Cut” means canned okra consisting of pods with the caps and stems removed, which have been cut transversely into pieces.

§ 52.3334 *Grades of canned okra.* (a) “U. S. Grade A” or “U. S. Fancy” is the quality of canned okra that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a good color; that is practically uniform in size; that is practically free from defects; that possesses a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 85 points.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

(b) "U. S. Grade C" or "U. S. Standard" is the quality of canned okra that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a fairly good color; that is fairly uniform in size; that is fairly free from defects; that possesses a fairly good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided*, That the canned okra may be variable in size if the total score is not less than 70 points.

(c) "Substandard" is the quality of canned okra that fails to meet the requirements of U. S. Grade C or U. S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.3335 *Recommended fill of container.* The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned okra be filled with okra as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.3336 *Drained weights*—(a) *General.* The minimum drained weight recommendations for canned okra in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weight.* The drained weight is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage, and allow the product to drain for two minutes. The drained weight is the weight of the sieve and the drained product less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 3 size can (404 x 414) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the equivalent of

the No. 3 size can.

(c) *Compliance with recommended drained weights.* Compliance with the recommended drained weights is determined by averaging the drained weight from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(1) The average of the drained weights from all of the containers meets the recommended drained weight;

(2) One-half or more of the containers meets the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practice.

TABLE NO. I—RECOMMENDED MINIMUM DRAINED WEIGHT OF OKRA, IN OUNCES

Container size or designation	Container dimensions		Styles of canned okra	
	Width	Height	Whole or salad	Cut
	<i>Inches</i>	<i>Inches</i>		
8 oz. Tall.....	2 $\frac{1}{16}$	3 $\frac{1}{16}$	4.5	5
No. 1 Picnic.....	2 $\frac{1}{16}$	4	6.2	6.5
No. 1 Tall.....	3 $\frac{1}{16}$	4 $\frac{1}{16}$	9.8	10.2
No. 303.....	3 $\frac{1}{16}$	4 $\frac{9}{16}$	10	10.5
No. 2.....	3 $\frac{1}{16}$	4 $\frac{9}{16}$	12	12.8
No. 2 $\frac{1}{2}$	4 $\frac{1}{16}$	4 $\frac{1}{16}$	17.8	18.8
No. 10.....	6 $\frac{1}{16}$	7	60	60

FACTORS OF QUALITY

§ 52.3337 *Ascertaining the grade*—(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*
(i) Varietal characteristics.
(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number

of points that may be given such factors is:

Factors:	Points
Color -----	20
Size -----	10
Defects -----	35
Character -----	35
Total score-----	100

(b) *Normal flavor.* "Normal flavor" means that the product has a normal characteristic flavor and odor for the type and is free from objectionable flavors and objectionable odors of any kind.

§ 52.3338 *Ascertaining the rating for the factors which are scored.* The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3339 *Color*—(a) (A) *classification.* Canned okra that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the outer surfaces of the okra pods possess a practically uniform color typical for the type and variety of young, tender, properly prepared, and properly processed canned okra.

(b) (C) *classification.* Canned okra that possesses a fairly good color may be given a score of 14 to 16 points. Canned okra that falls into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the outer surfaces of the okra pods possess a fairly uniform color typical for the type and variety of fairly tender, properly prepared, and properly processed canned okra.

(c) (SStd.) *classification.* Canned okra that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3340 *Size*—(a) (A) *classification.* Canned okra that is practically uniform

in size may be given a score of 8 to 10 points. "Practically uniform in size" has the following meanings with respect to the following styles of canned okra:

(1) *Whole and whole salad.* (i) In 90 percent, by count, of the most uniform pods of okra, the length of the longest unit is not more than twice the length of the shortest unit, and that

(ii) The overall length of the unit does not exceed 3½ inches.

(2) *Cut.* The appearance of the product is not materially affected by the variation in the size of the units.

(b) (C) *classification.* Canned okra that is fairly uniform in size may be given a score of 7 points. Canned okra that falls into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" has the following meanings for the following styles:

(1) *Whole and whole salad.* In 90 percent, by count, of the most uniform pods of okra, the length of the longest unit is not more than three times the length of the shortest unit.

(2) *Cut.* The appearance of the product is not seriously affected by the variation in the size of the units.

(c) (SStd.) *classification.* Canned okra that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 6 points and shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3341 *Defects*—(a) *General.* The factor of defects refers to the degree of freedom from extraneous vegetable matter, small pieces, poorly trimmed units, misshapen pods, and from damaged or seriously damaged units.

(1) "Extraneous vegetable matter" means any vegetable substance (including but not limited to a leaf, unattached stem, or portions thereof) that is harmless.

(2) "Small pieces" means pieces of canned okra less than ¾ inch in length.

(3) "Poorly trimmed": (i) "With respect to whole style" means a unit that has an attached stem more than ¼ inch

in length measured from the blossom scar.

(ii) "With respect to whole salad style" means a unit that has an attached stem less than $\frac{1}{2}$ inch or more than 1 inch in length measured from the blossom scar.

(iii) "With respect to cut style" means a unit that is partially cut or possesses ragged edges or attached caps or portions thereof.

(4) "Misshapen unit" means any unit in whole or whole salad styles that is malformed or crooked to the extent that the appearance or eating quality of the unit is seriously affected.

(5) "Damaged unit" means any pod or piece of pod affected by insect injury, pathological injury, mechanical injury, discoloration, or damaged by other means to the extent that the appearance or eating quality is materially affected.

(6) "Seriously damaged unit" means damaged to such an extent that the appearance or eating quality is seriously affected.

(b) (A) *classification*. Canned okra that is practically free from defects may be given a score of 30 to 35 points. "Practically free from defects" means that extraneous vegetable matter, small pieces of canned okra, poorly trimmed units, misshapen units, and damaged and seriously damaged units may be present for the applicable styles that do not materially affect the appearance and eating quality of the product.

(c) (C) *classification*. Canned okra that is fairly free from defects may be given a score of 25 to 29 points. Canned okra that falls into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that extraneous vegetable matter, small pieces of canned okra, poorly trimmed units, misshapen units, and damaged or seriously damaged units may be present for the applicable styles that do not seriously affect the appearance and eating quality of the product.

(d) (SStd.) *classification*. Canned okra that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 24 points and shall

not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3342 *Character*—(a) *General*. The factor of character refers to the degree of development of the pod, the freedom from fibrous material, and the tenderness and texture of the pod and the seed.

(b) (A) *classification*. Canned okra that possesses a good character may be given a score of 30 to 35 points. "Good character" means that the units are tender and practically free from fibrous material, which is objectionable upon eating, that the seeds are in the early stages of development, and that with respect to Type I canned okra the appearance of the product is not more than slightly affected by the presence of broken, crushed, or mashed units and with respect to Type II canned okra the appearance is not materially affected by the presence of crushed, broken, and mashed units.

(c) (C) *classification*. Canned okra that possesses a fairly good character may be given a score of 24 to 29 points. Canned okra that falls into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units may be fairly tender, that the seeds may have passed the early stages of development, and that the product contains not more than 0.20 percent, by weight, of dried cellulose material.

(d) (SStd.) *classification*. Canned okra that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

METHODS OF ANALYSIS

§ 52.3343 *Percent, by weight, of fibrous material*. (a) Canned okra shall be tested by the following method to determine the percent, by weight, of fibrous material:

(1) Distribute the contents of the container over the meshes of a circular sieve which has been previously weighed. The

diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. The bottom of the sieve is woven wire cloth which complies with the specifications for such cloth set forth under "2380 Micron (No. 8)" in Table I of "Standard Specifications for Sieves," published March 1, 1940, in L. C. 584 of the United States Department of Commerce, National Bureau of Standards. Without shifting the material on the sieve, so incline the sieve as to facilitate drainage. Two minutes from the time drainage begins, weigh the sieve and the drained material. Record, in ounces, the weight so found less the weight of the sieve as the drained weight.

(2) (i) Remove from the sieve one or more representative samples of $3\frac{1}{2}$ to 4 ounces, covering each sample as taken to prevent evaporation. Transfer to the metal cup of a malted milk stirrer and mash with a pestle. Wash material adhering to the pestle back into cup with 200 cc. of boiling water. Bring mixture nearly to a boil, add 25 cc. of 50 percent (by weight) sodium hydroxide solution and bring to a boil. (If foaming is excessive, 1 cc. of capryl alcohol may be added.) Boil for 5 minutes, then stir for 5 minutes with a malted milk stirrer capable of a no-load speed of at least 7200 r. p. m. Use a rotor with two scalloped buttons shaped as shown in the diagram in Exhibit 1.

(ii) Transfer the material from the cup to a previously weighed 30-mesh monel metal screen having a diameter of about $3\frac{1}{2}$ to 4 inches and side walls about 1 inch high, and wash fiber on the screen with a stream of water using a pressure not exceeding a head (vertical distance between upper level of water and outlet of glass tube) of 60 inches, delivered through a glass tube 3 inches long and $\frac{1}{8}$ inch inside diameter inserted into a rubber tube of $\frac{1}{4}$ inch inside diameter. Wash the pulpy portion of the material through the screen and continue washing until the remaining fibrous material, moistened with phenolphthalein solution, does not show any red color after standing 5 minutes. Again wash to remove phenolphthalein. Dry the screen containing the fibrous material for 2 hours at 100°C ., cool, weigh, and deduct weight of screen. Divide the weight of fibrous material by the drained weight and multiply by 100 to obtain the percentage of fibrous material.

ASCERTAINING THE GRADE OF A LOT

§ 52.3344 *Ascertaining the grade of a lot.* The grade of a lot of canned okra is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits, vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87 of this chapter).

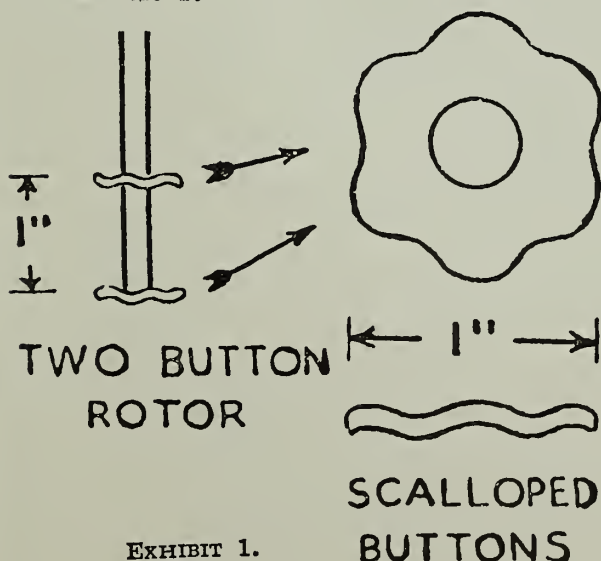


EXHIBIT 1.



1022478171

6

SCORE SHEET

§ 52.3345 *Score sheet.*

Container size.....	
Container code or marking.....	
Label.....	
Net weight (ounces).....	
Vacuum readings (inches).....	
Drained weight (ounces).....	
Type.....	
Style.....	
Count.....	

Factors	Score points	
Color.....	20	{ (A) 17-20 (C) ¹ 14-16 (SStd.) ¹ 10-13
Size.....	10	{ (A) 8-10 (C) ¹ 7 (SStd.) ² 0-6
Defects.....	35	{ (A) 30-35 (C) ¹ 25-29 (SStd.) ¹ 0-24
Character.....	35	{ (A) 30-35 (C) ¹ 24-29 (SStd.) ¹ 0-23
Total score.....	100	
Flavor.....		
Grade.....		

¹ Indicates limiting rule.² Indicates partial limiting rule.

The United States Standards for Grades of Canned Okra (which is the second issue) contained in this subpart shall become effective 30 days after publication hereof in the FEDERAL REGISTER, and thereupon will supersede the United States Standards for Grades of Canned Okra (7 CFR Part 52) which have been in effect since October 18, 1933.

Dated: May 31, 1957.

[SEAL] ROY W. LENNARTSON,
Deputy Administrator,
Marketing Services.